

FIG. 1
(PRIOR ART)

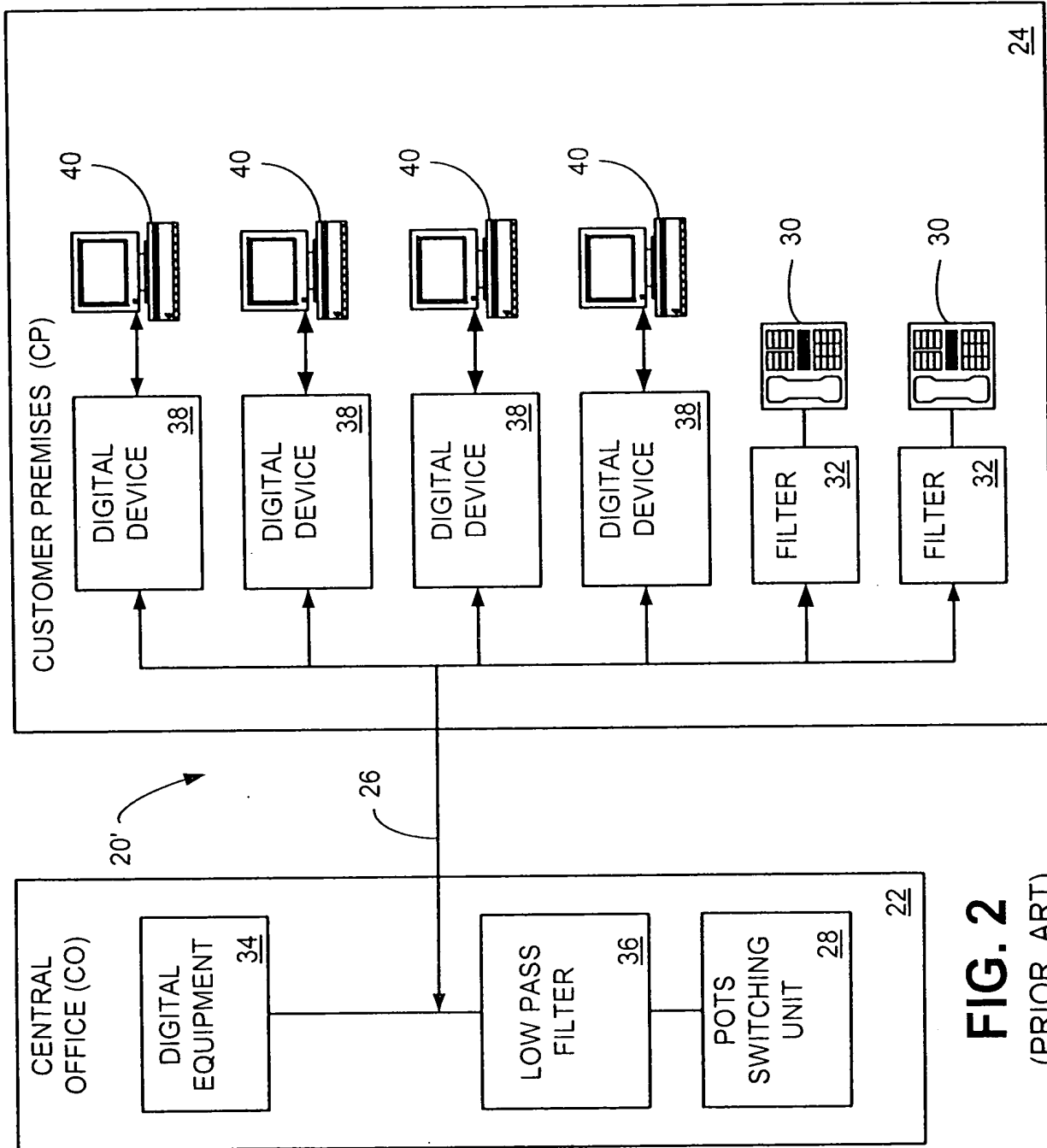
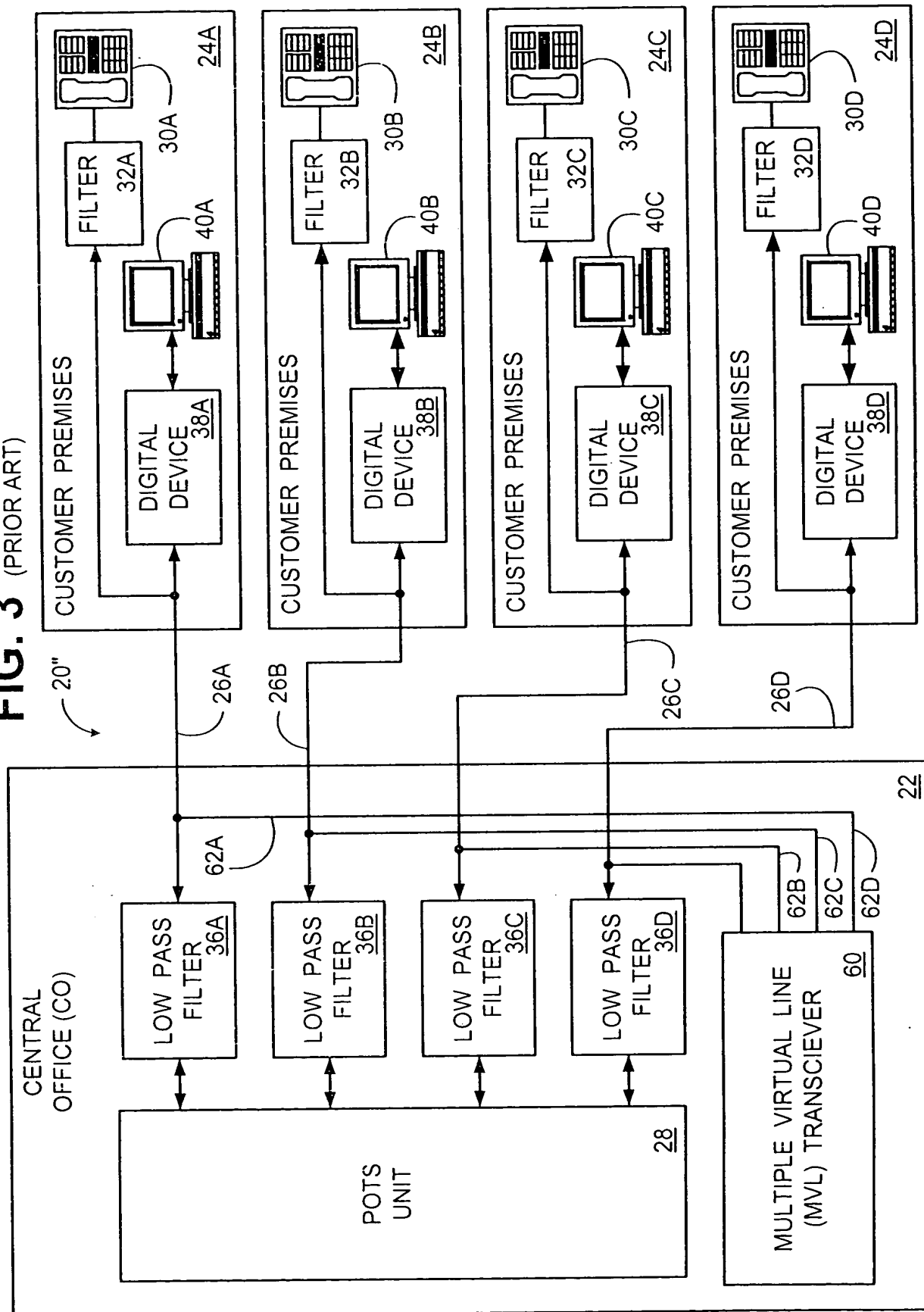


FIG. 2
(PRIOR ART)

FIG. 3 (PRIOR ART)



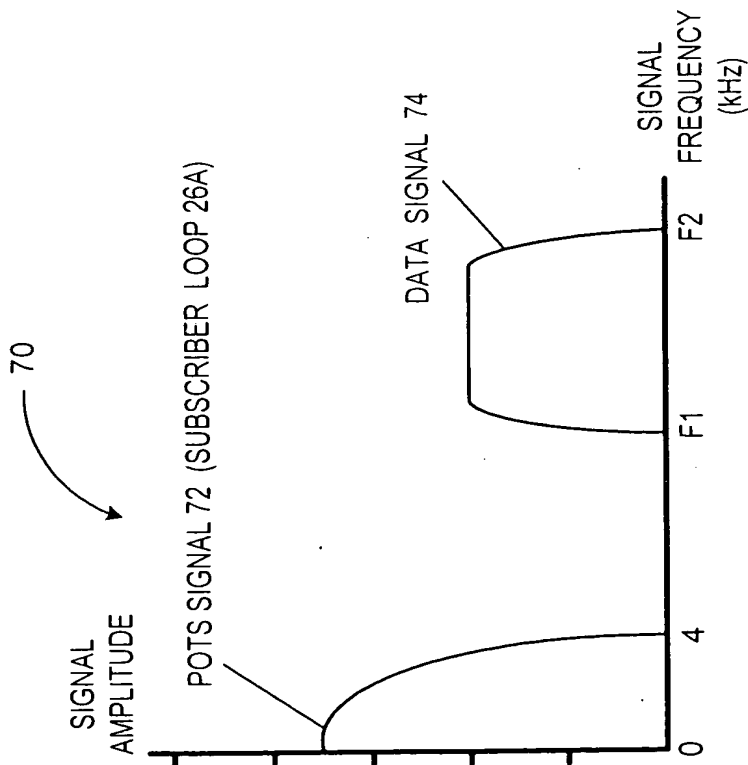


FIG. 4A
(PRIOR ART)

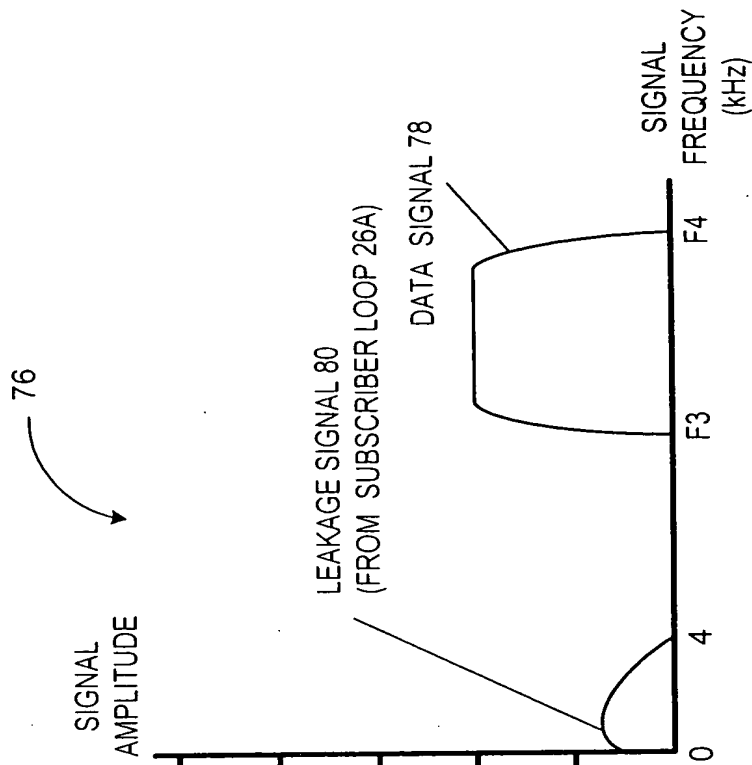


FIG. 4B
(PRIOR ART)

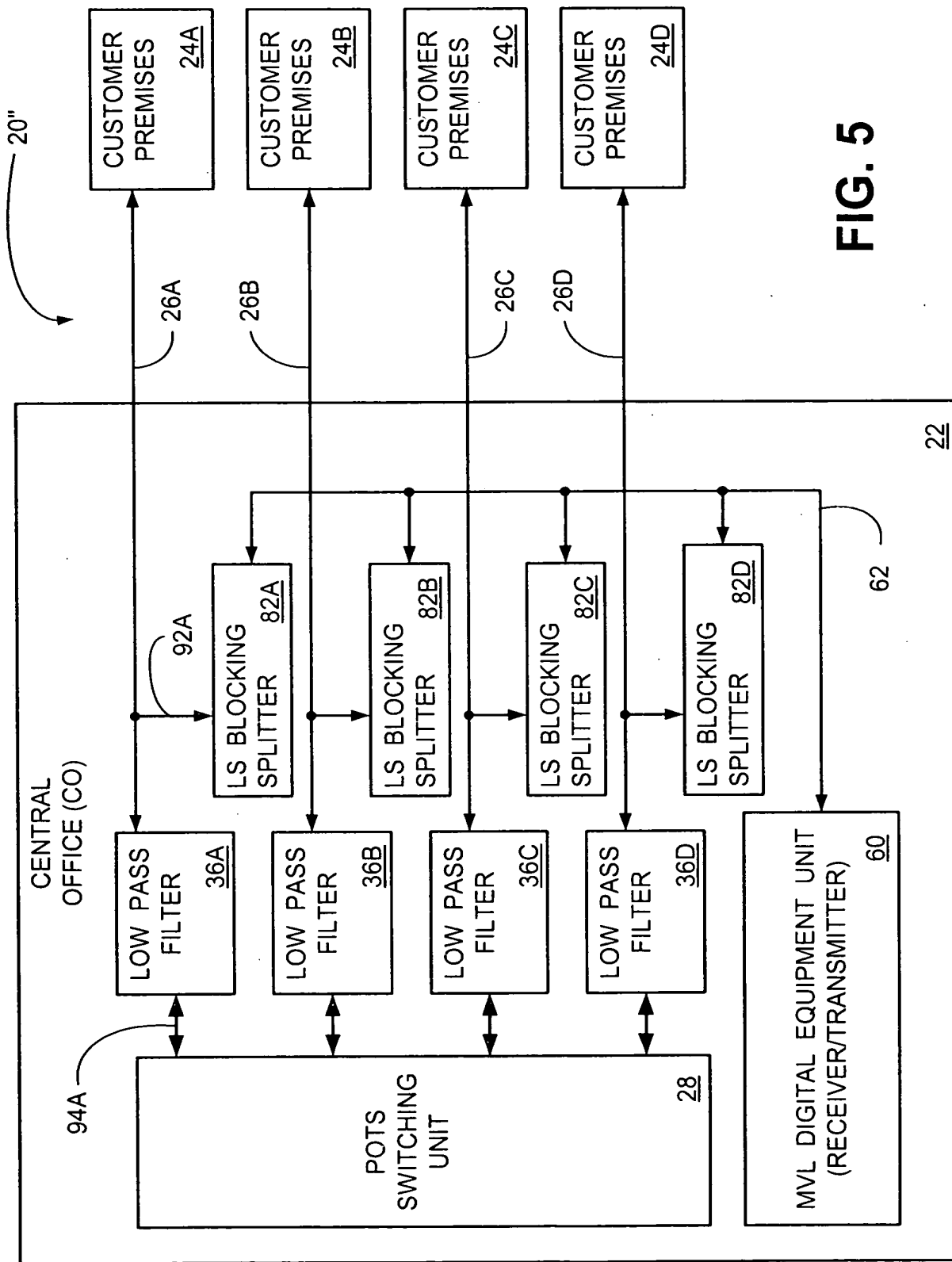
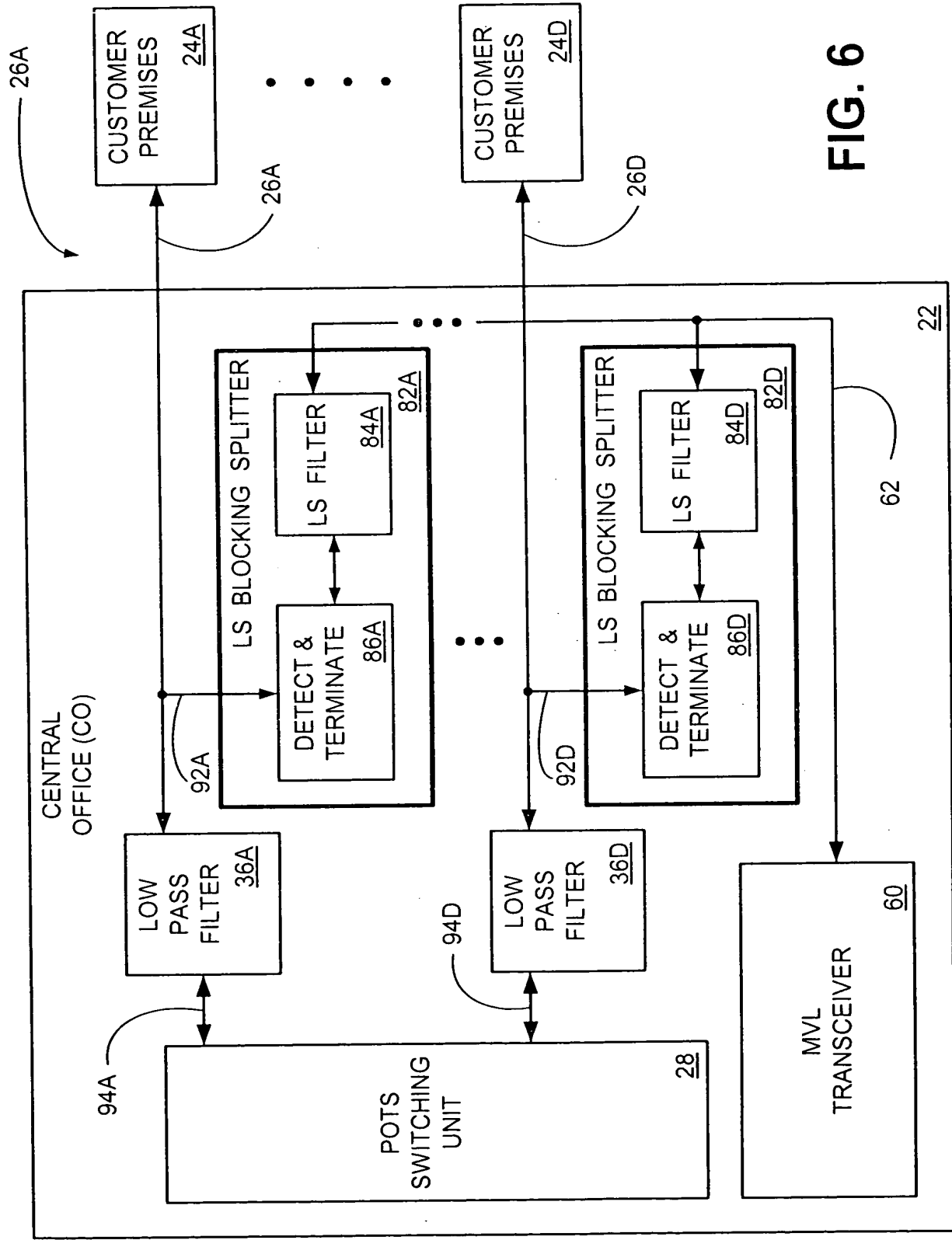
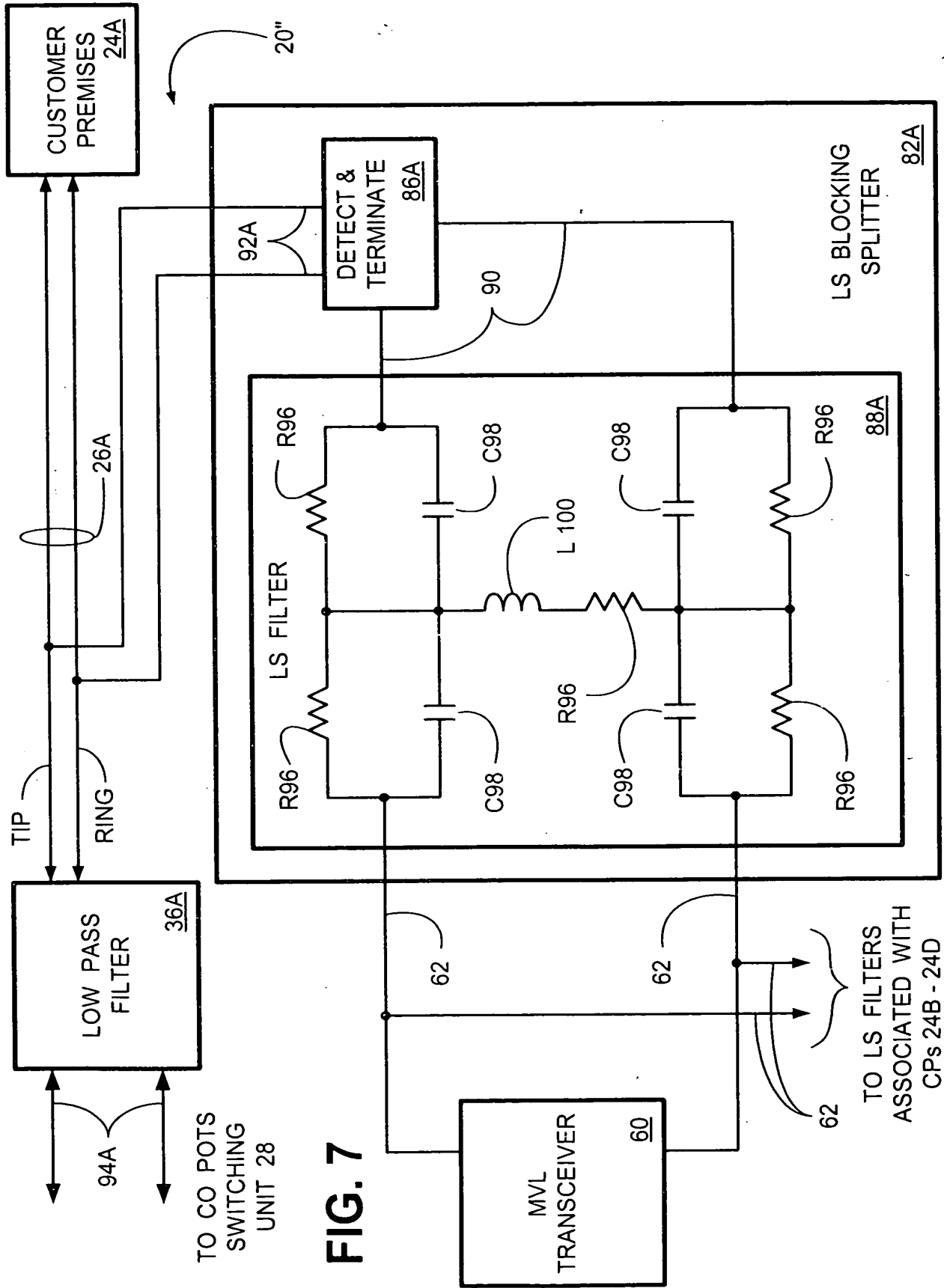


FIG. 5





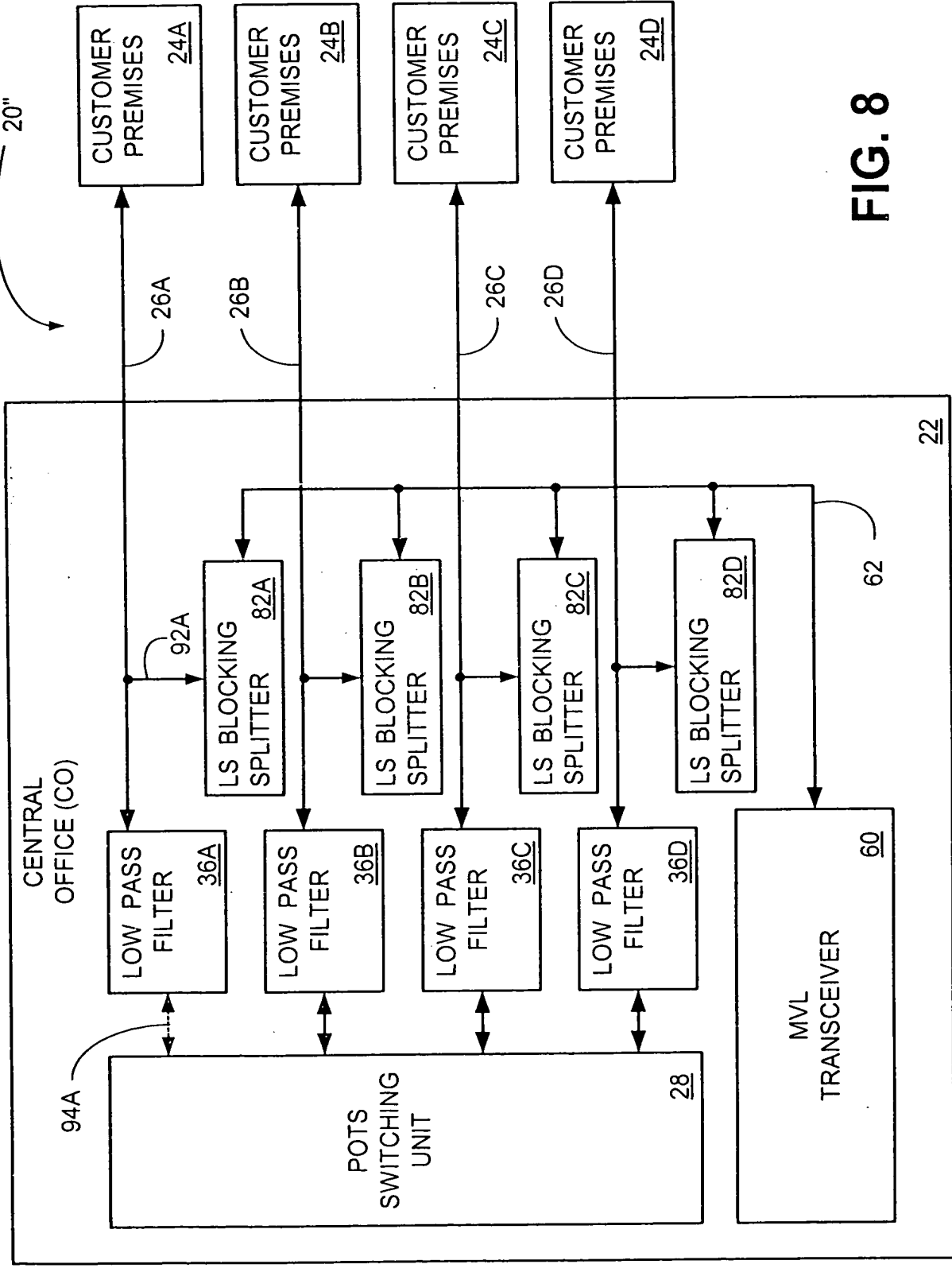


FIG. 8

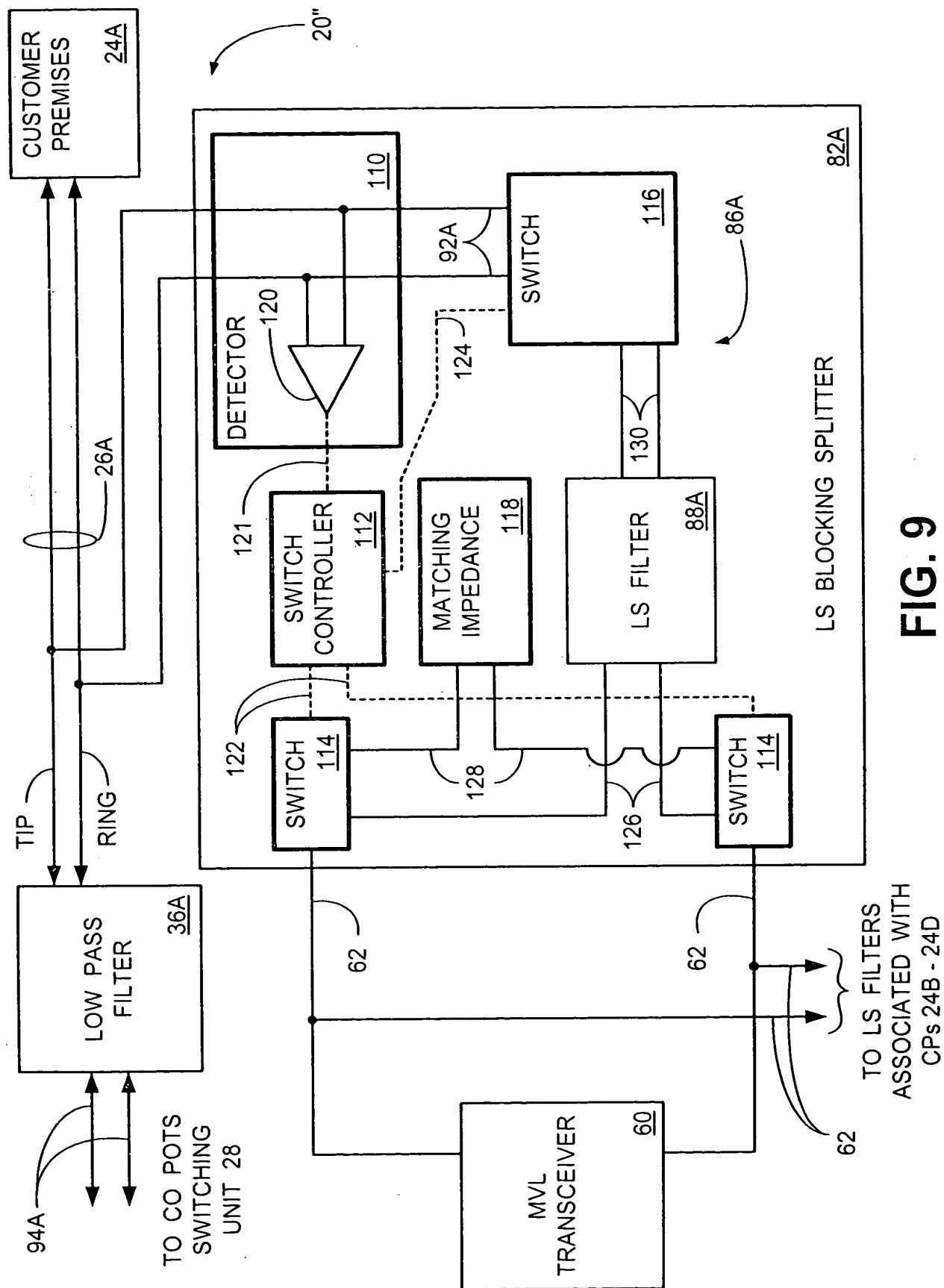


FIG. 10

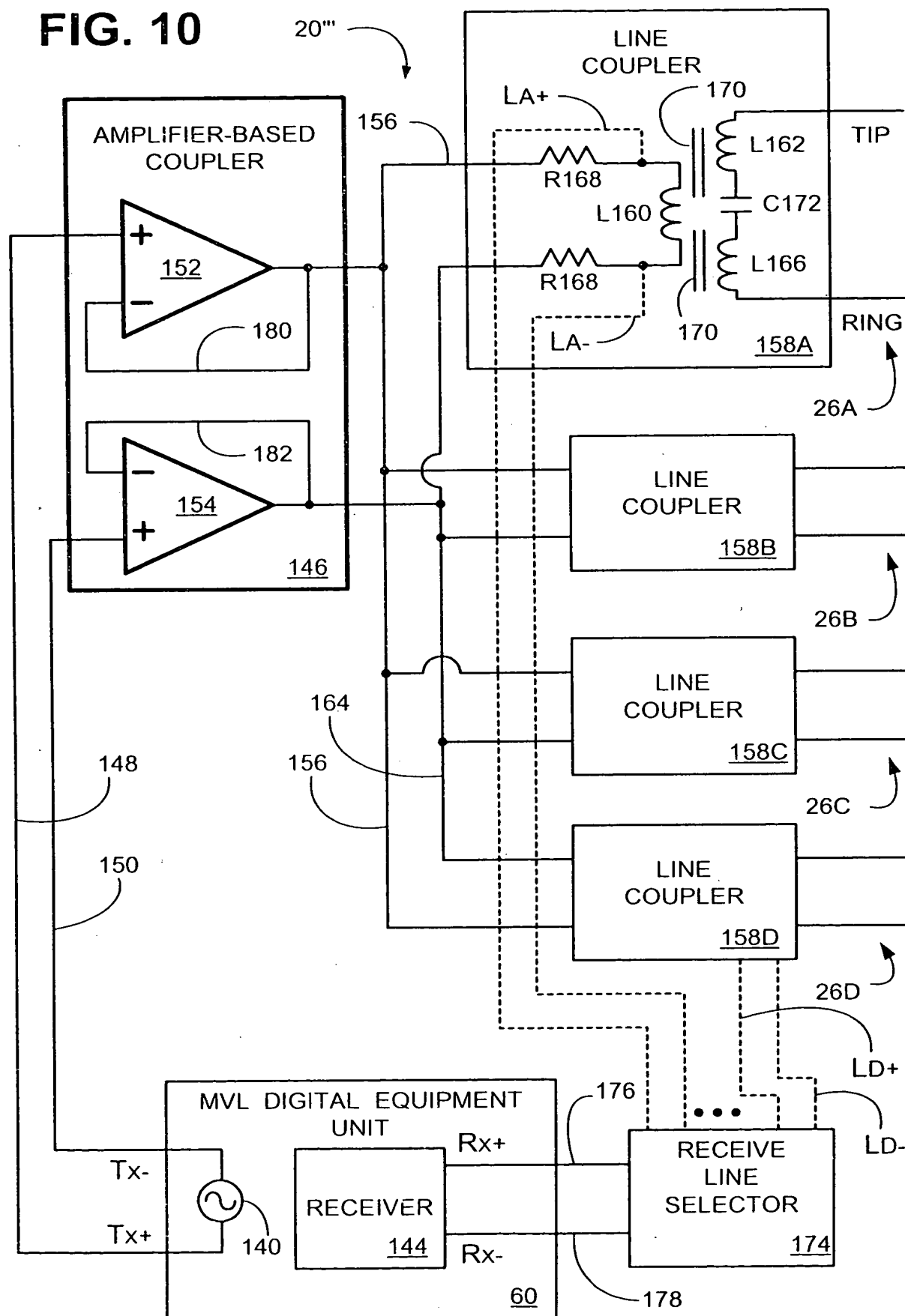


FIG. 11

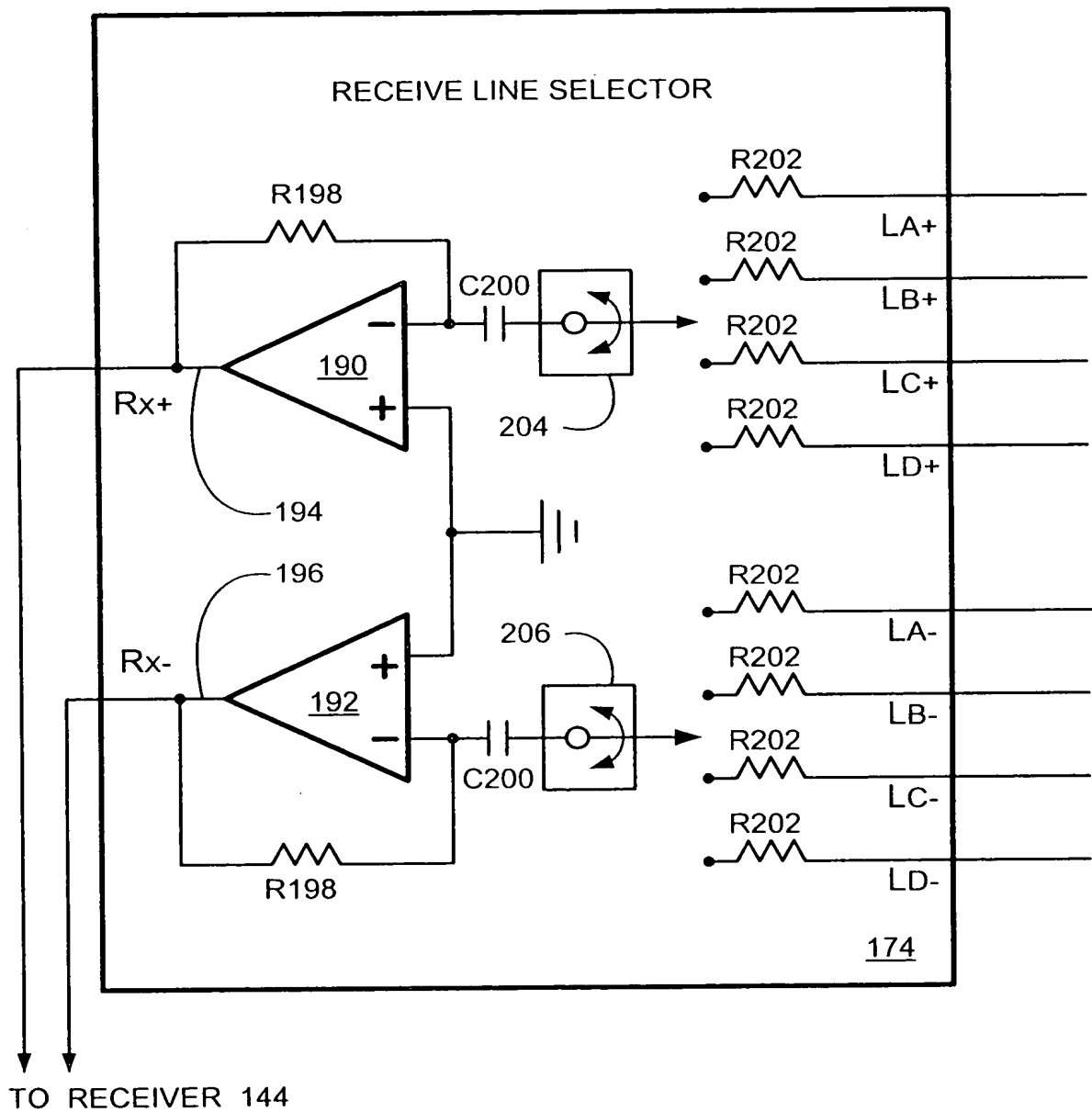


FIG. 12

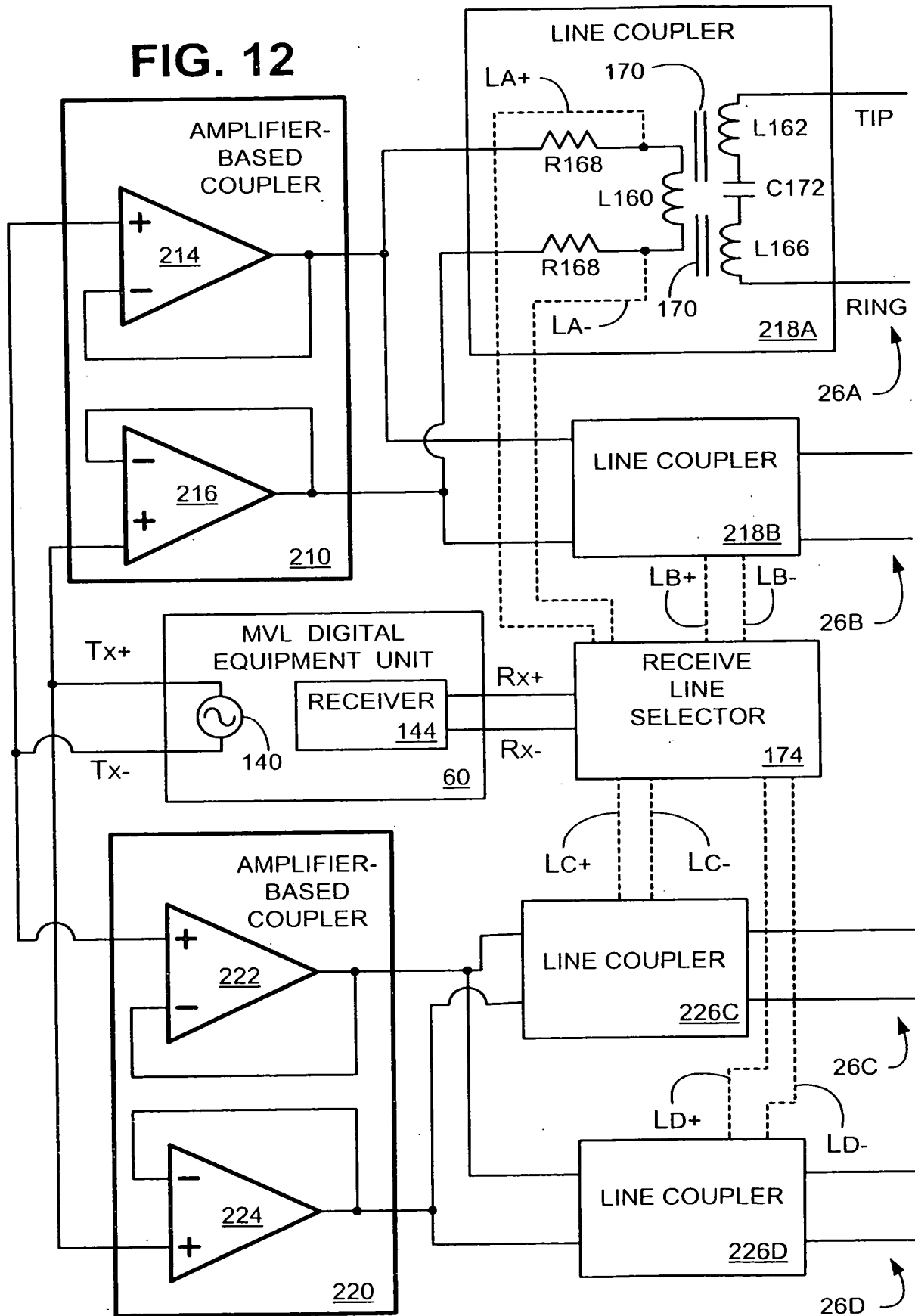


FIG. 13A

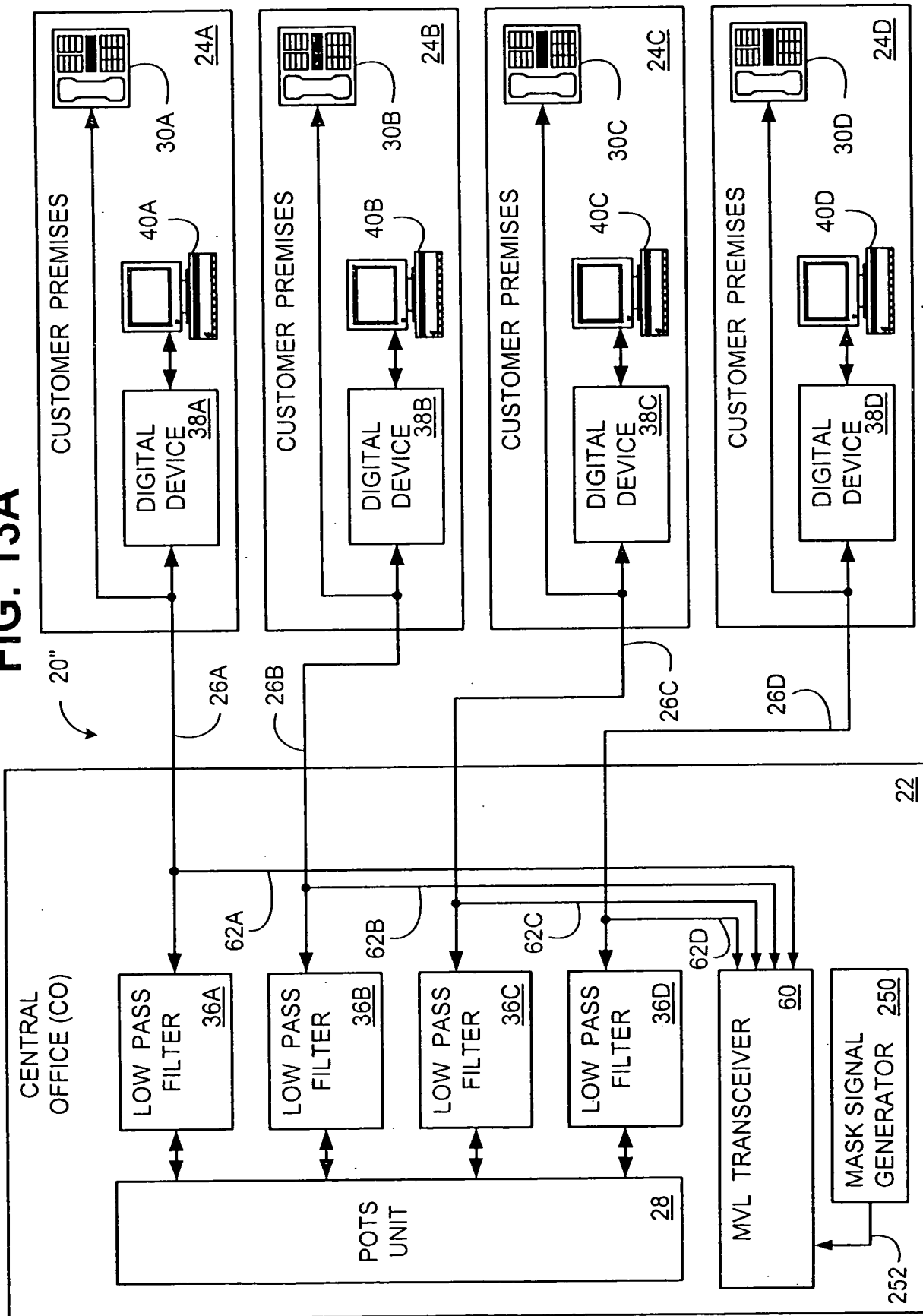
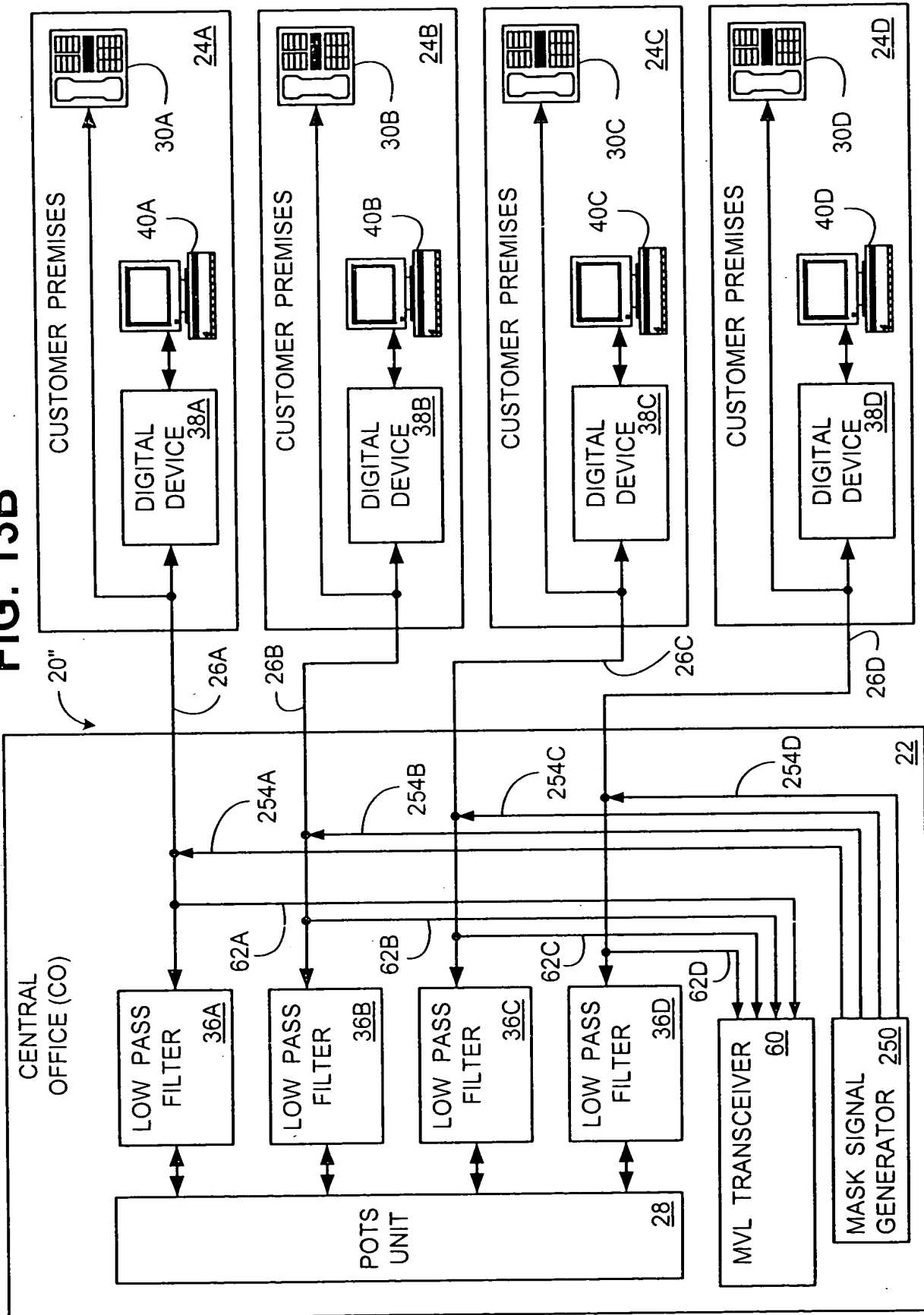


FIG. 13B



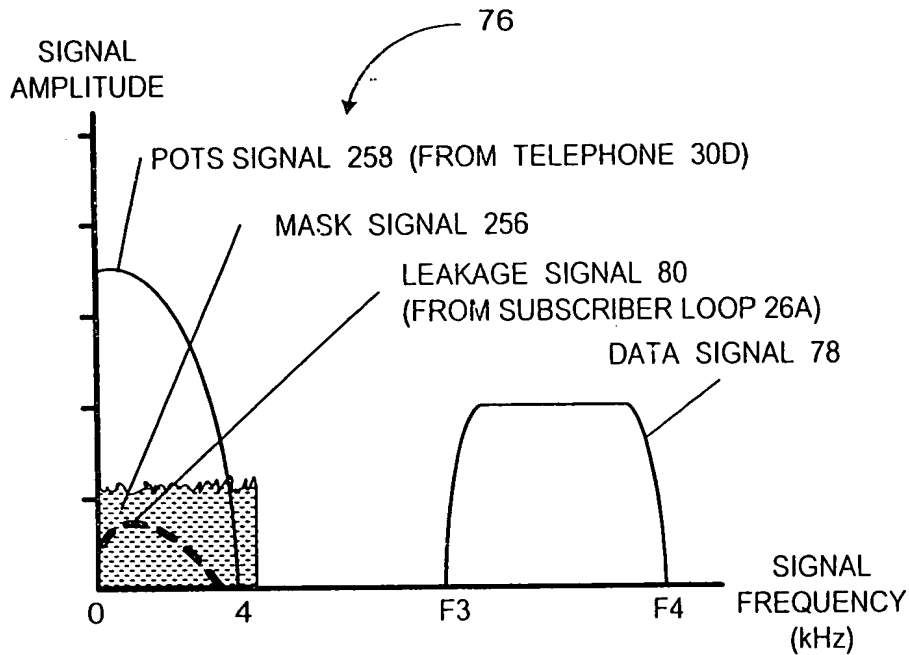


FIG. 14

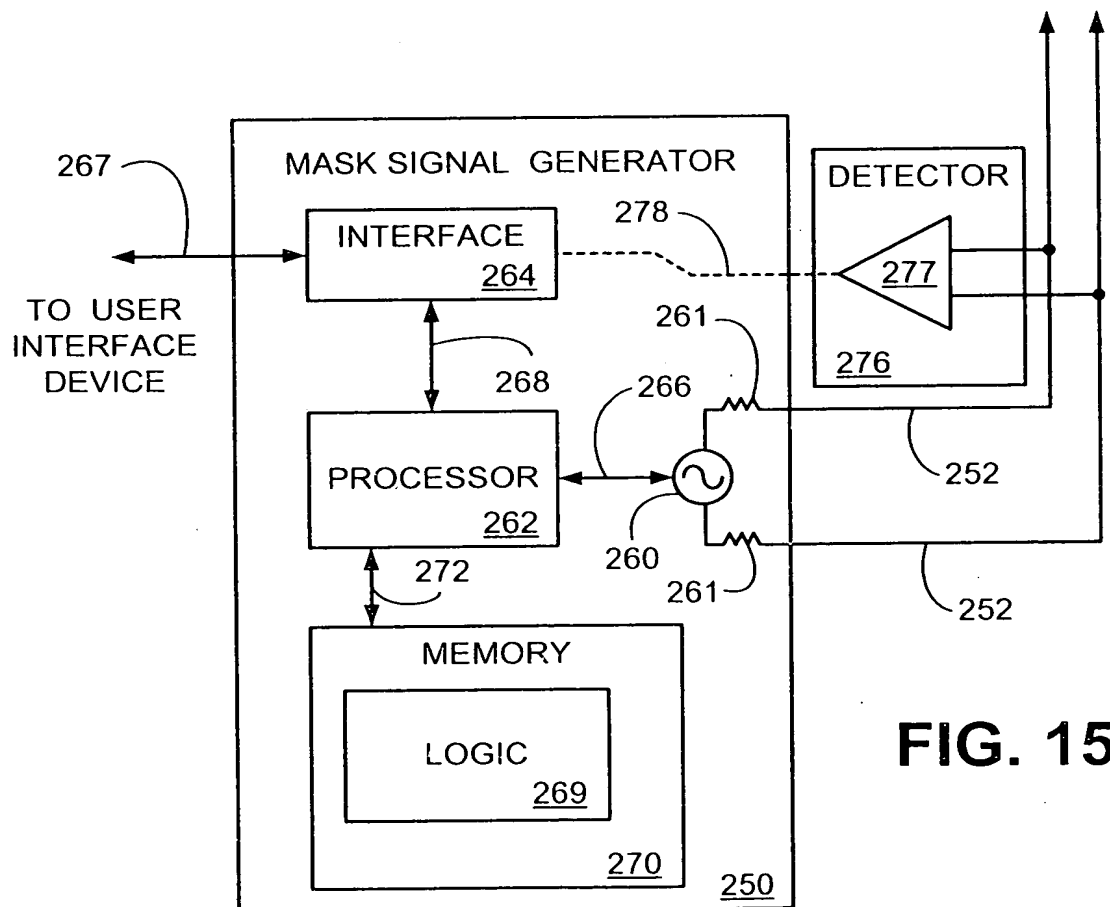


FIG. 15

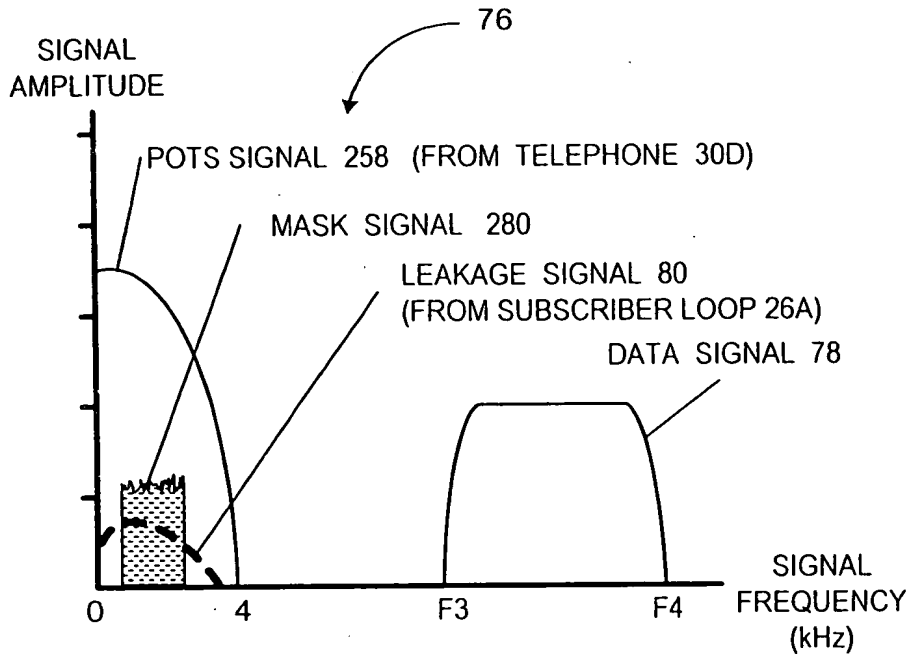


FIG. 16A

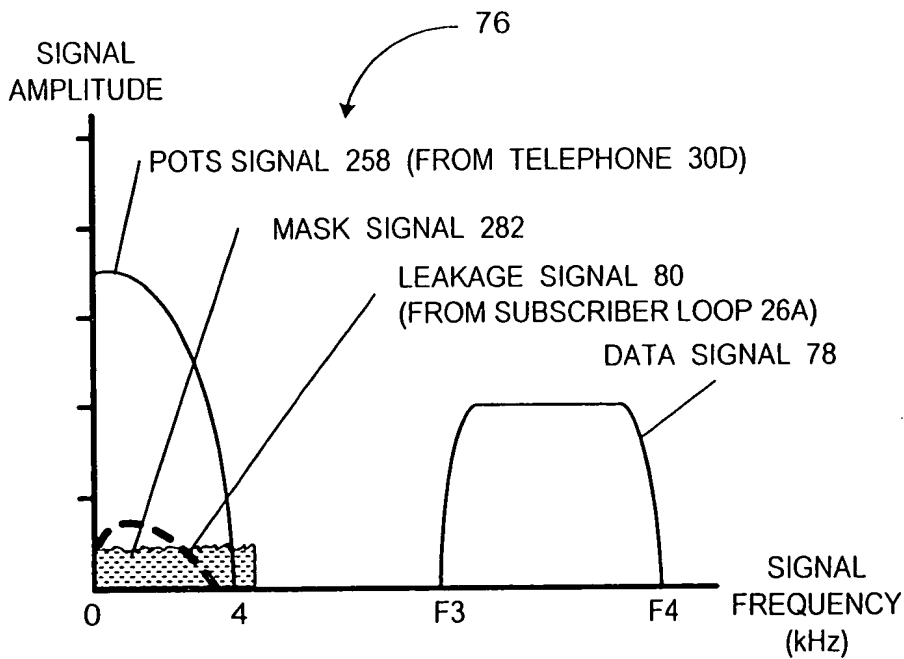
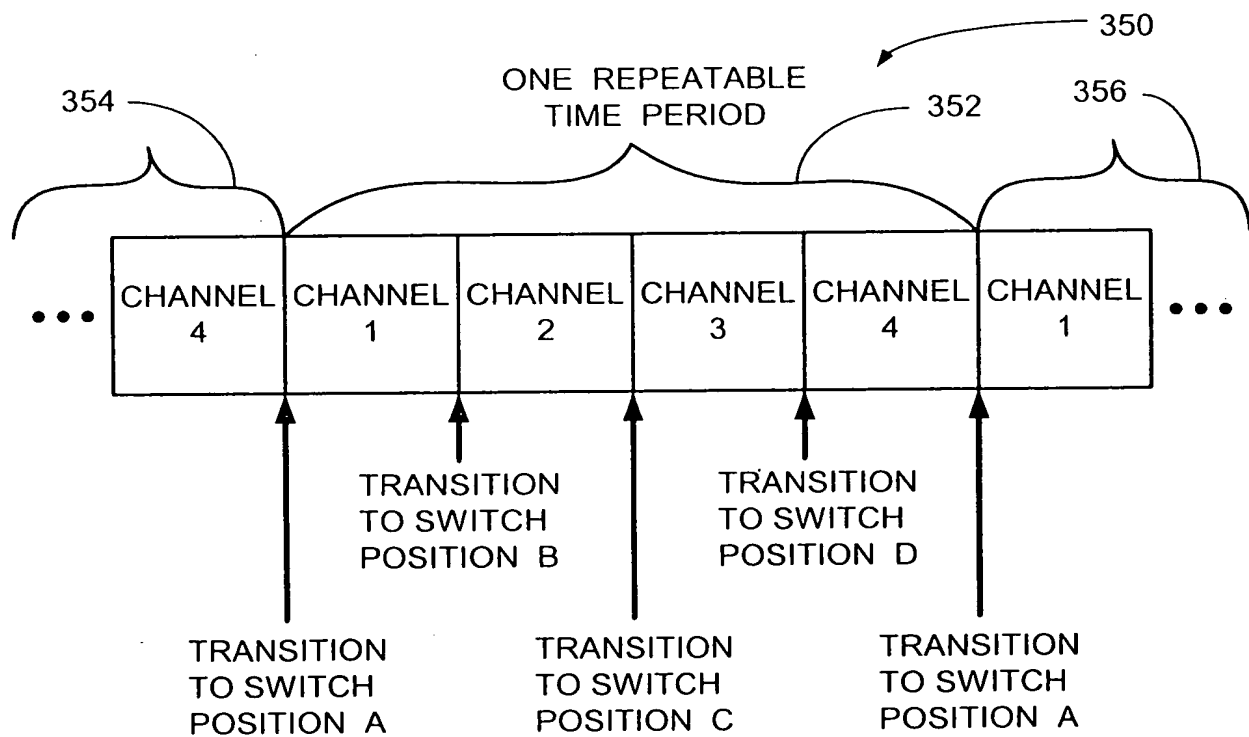
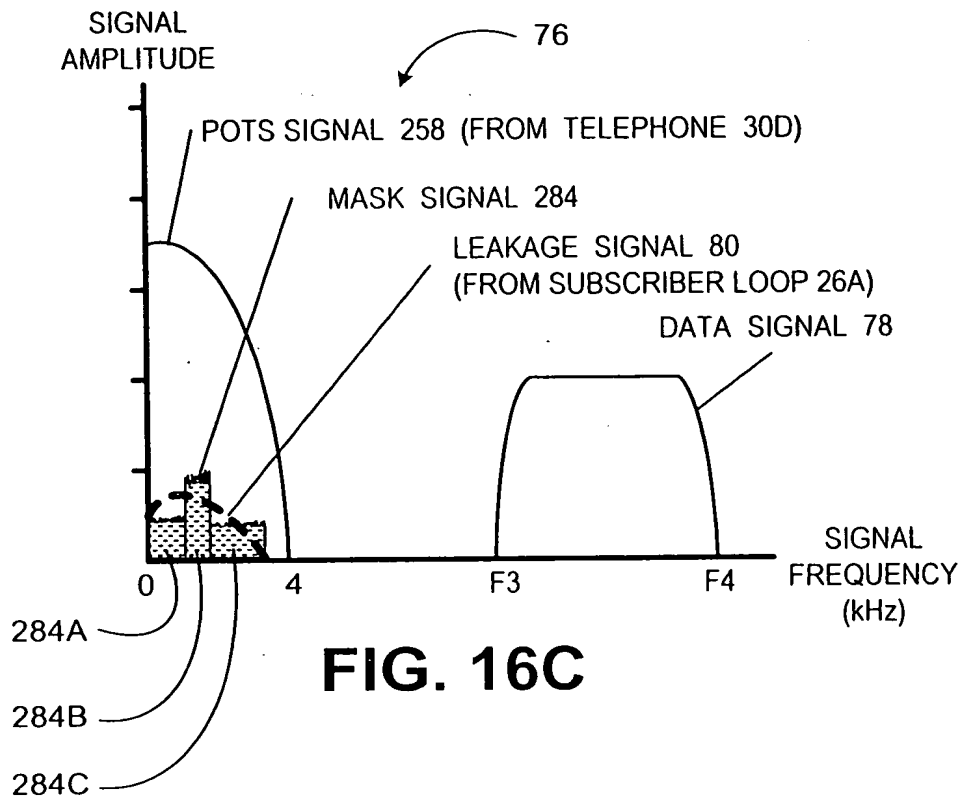


FIG. 16B

004848 12200



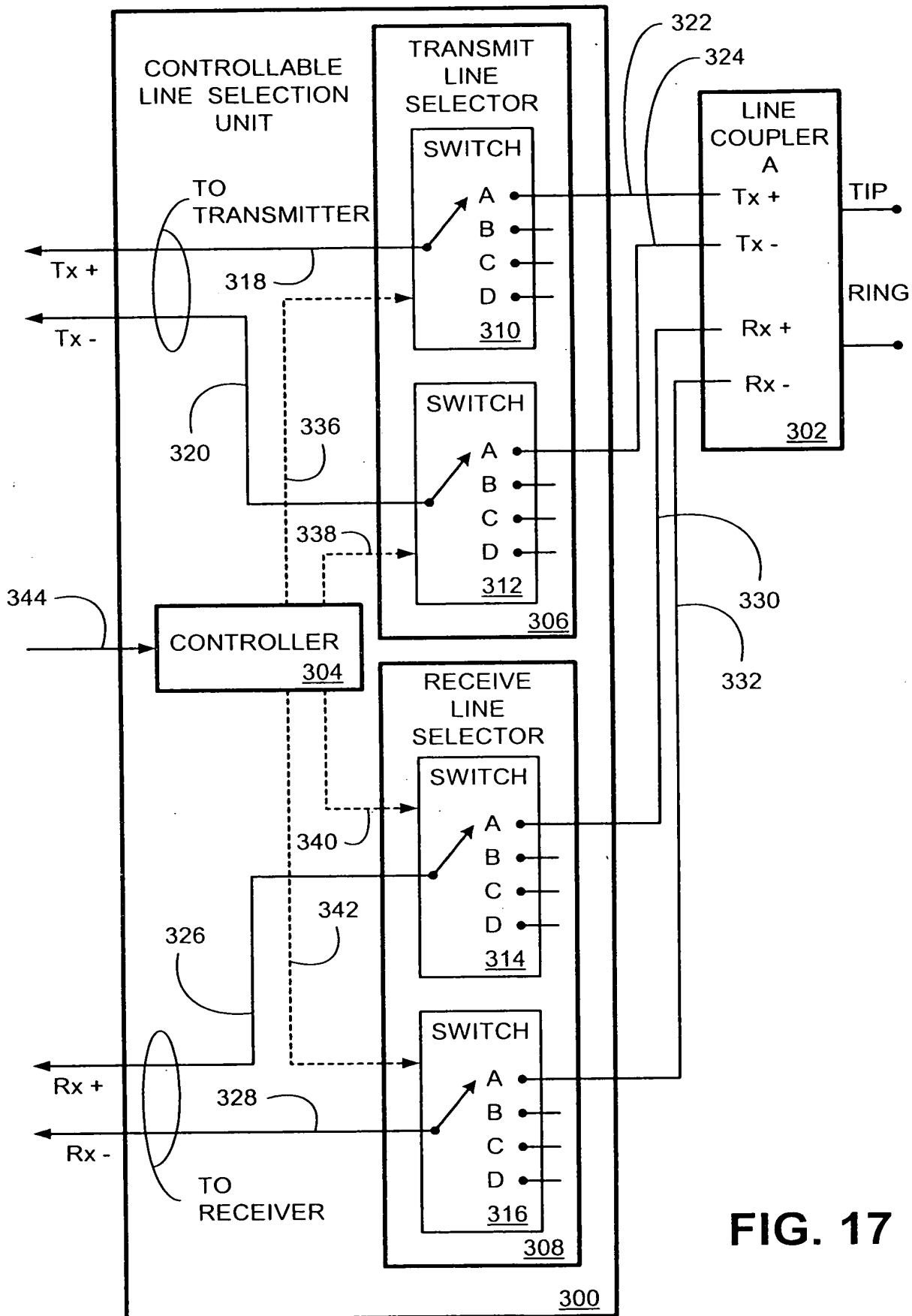


FIG. 17

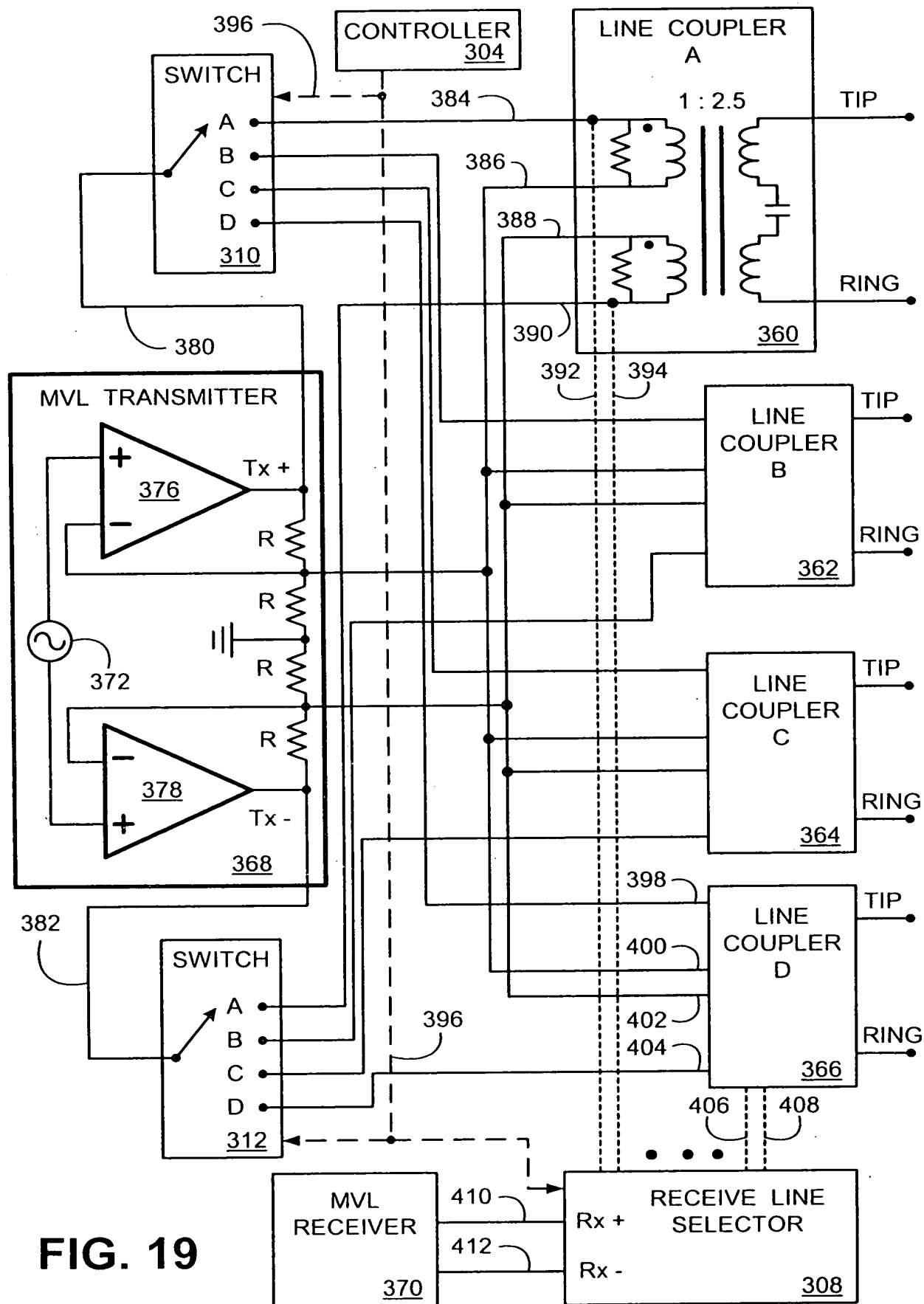
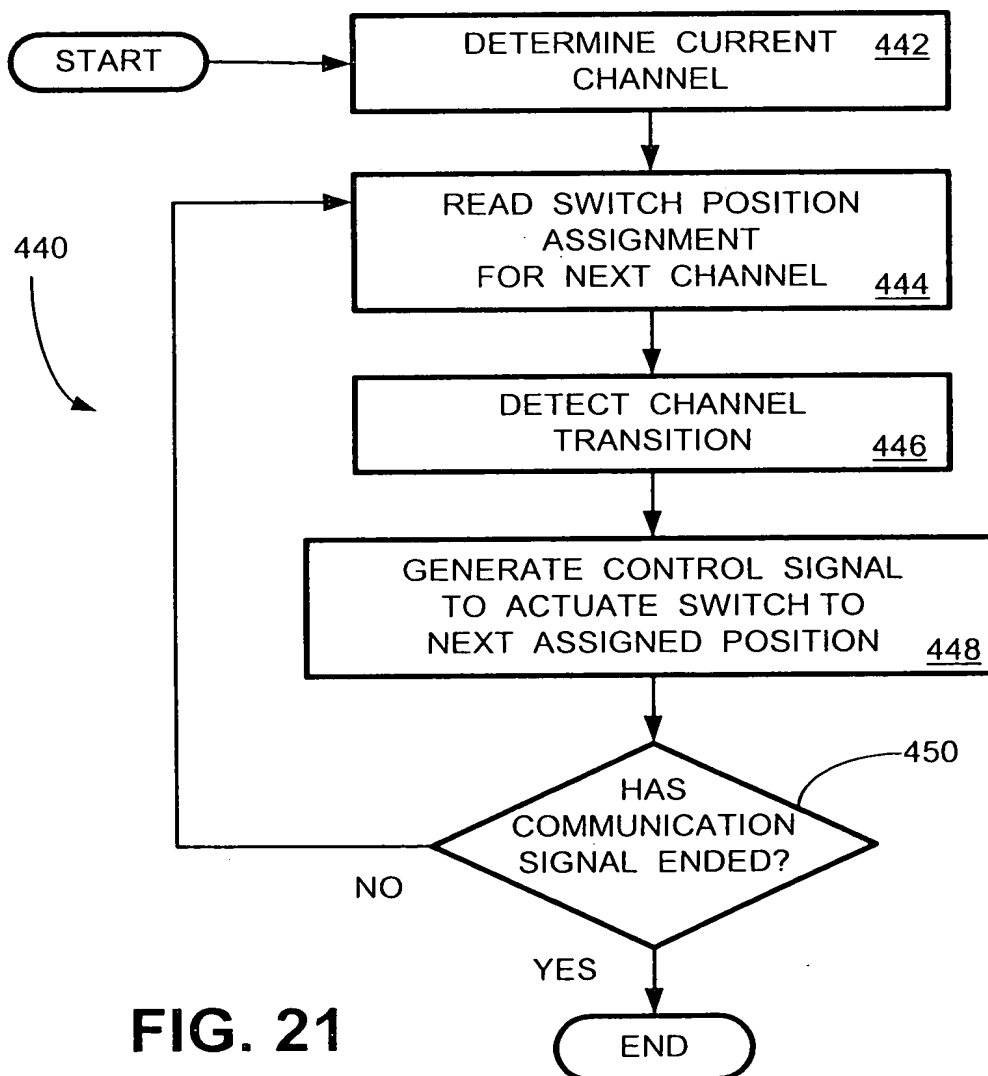
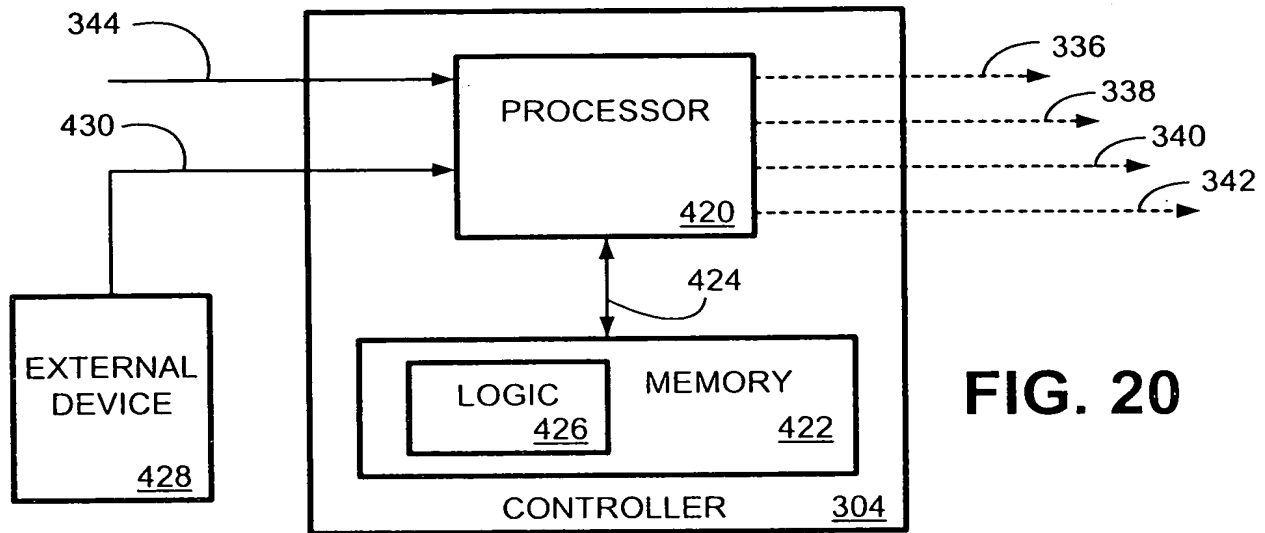


FIG. 19



09748487 122700

The diagram illustrates a controllable line selection unit (460) that manages signal flow between a transmitter (462) and a receiver (464) through various line couplers and switches. A central controller (466) receives an external control signal (484) and manages the operation of the unit via control lines (486, 488, 490, 492, 494, 496, 498).

Transmitter Path (Top):

- The **TRANSMITTER (462)** outputs signals $Tx +$ and $Tx -$.
- The **TRANSMIT LINE SELECTOR (468)** contains two switches:
 - Switch 472:** Receives $Tx +$ and is controlled by line 494. It has terminals M, N, O, and P.
 - Switch 474:** Receives $Tx -$ and is controlled by line 488. It also has terminals M, N, O, and P.
- The output of switch 472 (terminal M) is connected to **LINE COUPLER M (480)** via line 502.
- The output of switch 474 (terminal M) is connected to **LINE COUPLER P (482)** via line 504.
- LINE COUPLER M (480)** has terminals $Tx +$, $Tx -$, $Rx +$, and $Rx -$. Its $Tx +$ and $Tx -$ terminals are connected to the **TIP** and **RING** lines, respectively.
- LINE COUPLER P (482)** has terminals $Tx +$, $Tx -$, $Rx +$, and $Rx -$. Its $Tx +$ and $Tx -$ terminals are connected to the **TIP** and **RING** lines, respectively.

Receiver Path (Bottom):

- The **RECEIVER (464)** outputs signals $Rx +$ and $Rx -$.
- The **RECEIVE LINE SELECTOR (470)** contains two switches:
 - Switch 476:** Receives $Rx +$ and is controlled by line 490. It has terminals M, N, O, and P.
 - Switch 478:** Receives $Rx -$ and is controlled by line 492. It also has terminals M, N, O, and P.
- The output of switch 476 (terminal P) is connected to **LINE COUPLER M (480)** via line 506.
- The output of switch 478 (terminal P) is connected to **LINE COUPLER P (482)** via line 508.

Control and Connections:

- The **CONTROLLER (466)** is connected to the transmitter path via lines 486 and 488, and to the receiver path via lines 490 and 492.
- Control lines 494 and 496 connect the transmitter path to the controller.
- Control lines 498 and 490 connect the receiver path to the controller.
- The entire assembly is labeled **CONTROLLABLE LINE SELECTION UNIT (460)**.

FIG. 22

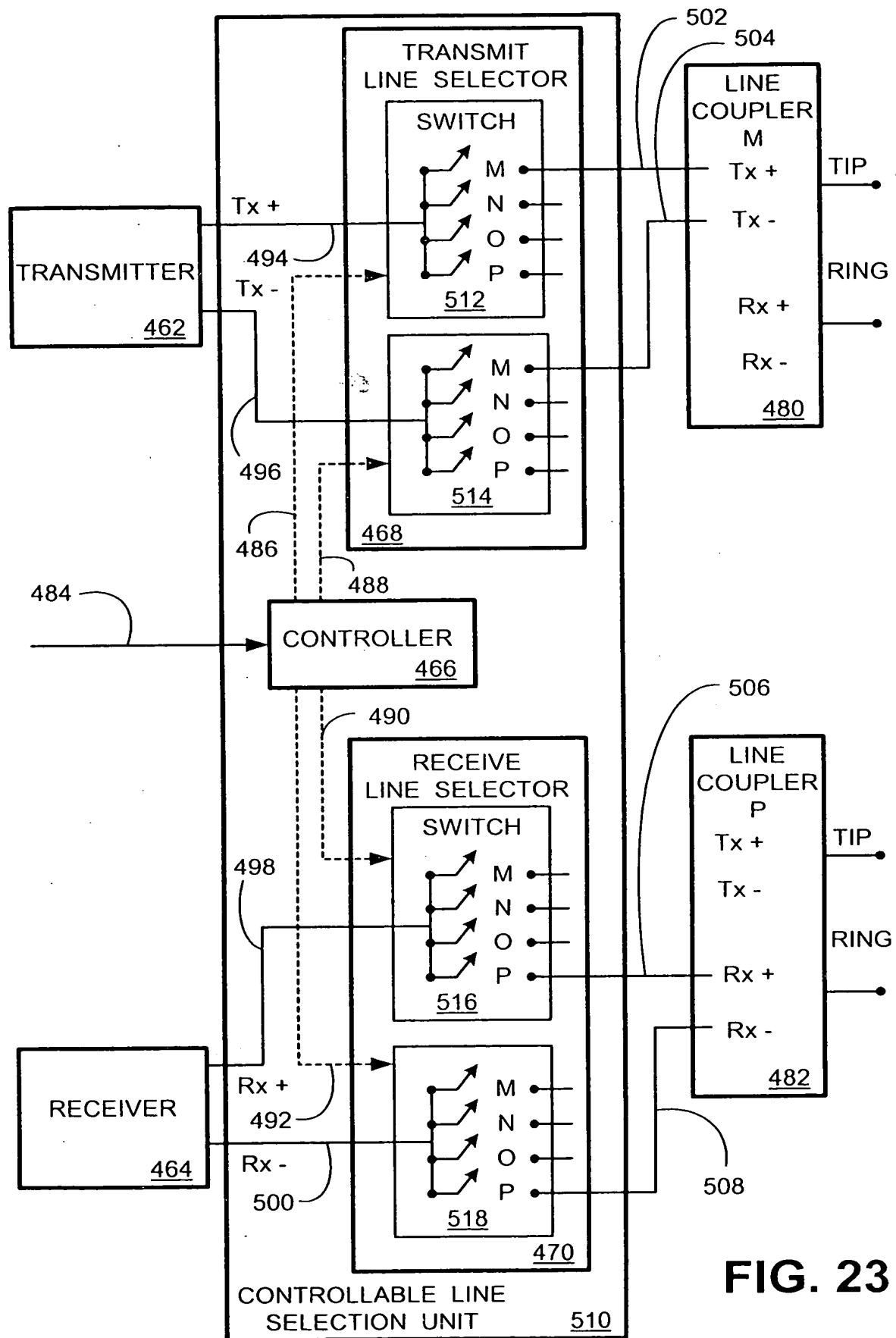


FIG. 23